WHAT IS CLAIMED IS:

1

8

	1	A hydrocarbon	armthodia	MEGAGG	AAMMETET TO
2	i	A nyorocarbon	SVIIIIIESIS	DIOCESS	comprising.
4	1.	1 1 II ; GI O CGI O CII	0,1101100-0	P	O

- (a) forming a synthesis gas by reacting a combustible carbonaceous material and a tail-gas with 1) steam and/or water and 2) oxygen or air or enriched air at an elevated temperature in a gasification reactor;
- (b) contacting the said synthesis gas with a hydrocarbon synthesis catalyst to form liquid hydrocarbons and the tail-gas in hydrocarbon synthesis reactor;
 - (c) separating the resulting tail-gas and the liquid hydrocarbons; and
- 9 (d) recycling the tail-gas back the reactor.
- The process of claim 1 comprising the additional step of removing carbon dioxide from a fraction of the tail-gas and mixing the carbon dioxide-free tail-gas fraction with the synthesis gas prior to contacting the synthesis gas with the hydrocarbon synthesis catalyst.
- The process of claim 1 comprising the additional step of combusting a fraction of the tail-gas and generating power from said combusted fraction.
- The process of claim 3 comprising the additional step of removing carbon dioxide from a second fraction of the tail-gas and mixing the carbon dioxide-free tail-gas second fraction with the synthesis gas prior to contacting the synthesis gas with the hydrocarbon synthesis catalyst.
- A method for consuming a tail-gas produced by reacting a synthesis gas with a
 hydrocarbon synthesis catalyst comprising reacting the tail-gas and a combustible
 carbonaceous material with steam and oxygen at an elevated temperature to form
 the synthesis gas.

- The method of claim 5 comprising the additional step of removing carbon dioxide from a fraction of the tail-gas and mixing the carbon dioxide-free tail-gas fraction with the synthesis gas prior to reacting the synthesis gas with the hydrocarbon synthesis catalyst.
- The method of claim 5 comprising the additional step of combusting a fraction of the tail-gas and generating power from said combusted fraction.
- The method of claim 7 comprising the additional step of removing carbon dioxide

 from a second fraction of the tail-gas and mixing the carbon dioxide-free tail-gas

 second fraction with the synthesis gas prior to reacting the synthesis gas with the

 hydrocarbon synthesis catalyst.